

Remarks

Claim Numbering.

The only change made to the claims over those previously presented is the renumbering of claims 44 to 46 as 45 to 47. Applicant is grateful to the Examiner for highlighting Applicant's oversight in respect of claim numbering when previously presenting said claims.

35 U.S.C. 103(a)

It is noted that the Examiner now rejects the claims under 35 USC §103(a) on a new combination of references, namely the combination of Forslow et al (US2002/0133534), Donovan (US2002/0057786) and newly cited reference Daude et al (US2004/0088542).

The present invention makes a useful contribution to the art over the combination of Forslow (US2002/0133534), Donovan (US2002/0057786) and Daude (US2004/0088542) in that only a single VPN gateway need be provided between the first and second data networks and for the other reasons discussed at page 5, lines 2 to 11 of the specification as filed. Contrast this with Forslow where it is clearly taught that each home agent 1 is *dedicated* to one mobile virtual private network 'M-VPN' (abstract). Furthermore, each home agent uses *public IP addresses* (paragraph 104) rather than the address space of its respective M-VPN. As such, Forslow is in some ways representative of the prior art system discussed in the present application with respect to figure 2 and exhibits much the same disadvantages as discussed in the specification at page 3, line 12 to page 4, line 22.

There is nothing in the disclosures of Donovan and Daude that would lead one of ordinary skill to go against the teaching of Forslow where each home agent 1 is dedicated to one mobile virtual private network 'M-VPN' and each home agent uses public IP addresses. The Examiner has substantially repeated his submission in respect of the combination of Forslow and Donovan that was

presented in the Office Action of September 26, 2007. However, this submission does not address this important issue. Therefore the Applicant would appreciate the Examiner's reasoning as to why one skilled in the art would set aside what Forslow so clearly teaches in this respect.

Furthermore, one skilled in the art would not seriously contemplate combining these three references nor could such a combination lead to the claimed arrangement for the following reasons.

The Examiner acknowledges that Forslow is deficient in not teaching or suggesting the feature of claim 20 of *the second data network using a network addressing scheme that is different to a network addressing scheme used by at least one of said plurality of VPNs* and in not teaching the feature that *the VPN media proxy is configured to pass information from a source address in said at least one of said plurality of VPNs to a destination address in said second data network, the VPN media proxy having an address translator arranged to translate the destination address of the information in accordance with the network addressing scheme of the second data network, and to send the information towards the translated destination address in the second data network.*

The Examiner is, however, of the view that such features are taught by Donovan and that it would have been obvious for one of ordinary skill in the art to modify Forslow to apply such features.

Furthermore, the Examiner acknowledges that the combination of Forslow and Donovan is deficient in not teaching or suggesting the feature of claim 20 that the claimed arrangement includes *a VPN gateway having a VPN media proxy interfacing the first and second data networks, the VPN gateway being shared by said plurality of VPNs and providing a plurality of virtual routing functions, respective ones of said plurality of virtual routing functions being connected to respective ones of said plurality of VPNs such that each virtual routing function is in the address space of a respective one of said plurality of VPNs.*

However, the Examiner is of the view that this feature is taught by Daude and that it would have been obvious for one of ordinary skill in the art to modify the combined teachings of Forslow and Donovan to apply such feature.

Forslow teaches that the home agent 1 interfaces the access network 9 (first data network) with the Internet 6 (the second data network). Forslow clearly and unambiguously teaches that each virtual home agent 1a, 1b has a public IP address (paragraph 0104, abstract). It equally clearly teaches that the foreign agent 2a has a public IP address (paragraph 0107, abstract). Furthermore, it teaches that the mobile service manager 7 is given a public IP address in order that it has an address that is unique across the two mobile VPN realms which use overlapping private address realms (paragraph 0107). This is also the reason why the foreign agent 2a and the virtual home agents 1a, 1b are given public IP addresses.

In any event, the fact that the foreign agent 2a has a public IP address means that data being transmitted from either of the mobile nodes 3a, 3b towards the access network 9 (first data network) must have the private realm addresses of their respective mobile node 3a, 3b translated to a public IP address at an ingress to or at some point in the network before reaching the foreign agent 2a. The foreign agent 2a having a public IP address simply routes the received data to the appropriate home agent 1a, b using the public address realm (i.e. public IP address realm) that is common to said foreign agent 2a and each of said home agents 1a, 1b and indeed which is also shared with the 'second data network' being the Internet 6. Consequently, one skilled in the art would not seriously contemplate modifying the system of Forslow to change it in the manner suggested by the Examiner. This is because the second data network (the internet 6) employs the same public IP address realm as the foreign agent 2a and the home agents 1a, 1b and thus no network address translation is necessary at the virtual home agents 1a, 1b. In fact, no network addressing translation is needed for data being transmitted from said mobile nodes 3a, 3b anywhere in the network after the foreign agent 2a.

To modify Forslow in the manner suggested would require taking data that has had its private realm address translated to a public IP address for ingress to the foreign agent 2a and translating said public IP address back to a private realm address in order for it to be then translated back to a public IP address for ingress to one of the virtual home agents 1a, 1b which are in the public IP address realm. This is logically incoherent and simply would not be seriously considered by one skilled in the art.

Furthermore, it follows from the fact that the foreign agent 2a, virtual home agents 1a, 1b and the second data network (the Internet 6) as taught by Forslow all share the public IP address realm, that one skilled in the art would never contemplate modifying Forslow such that each virtual home agent 1a, 1b is placed in the private address space/realm of its respective mobile node 3a, 3b. To make such a modification would then require the insertion of two additional layers of network address translation to overcome the effect of making this change. There is no plausible reason why one skilled in the art would break the system of Forslow to make this change and then have to apply additional network address translation means to fix it, all for no net gain.

For the reasons stated, the combination of Forslow, Donovan and Daude cannot result in the following important aspects of the invention as defined by claim 20, to wit the arrangement has "a VPN gateway having a VPN media proxy interfacing the first and second data networks, the VPN gateway being shared by said plurality of VPNs and providing a plurality of virtual routing functions, respective ones of said plurality of virtual routing functions being connected to respective ones of said plurality of VPNs such that each virtual routing function is in the address space of a respective one of said plurality of VPNs, wherein the VPN media proxy is configured to pass information from a source address in said at least one of said plurality of VPNs to a destination address in said second data network, the VPN media proxy having an address translator arranged to translate the destination address of the information in accordance with the network addressing scheme of the second data network, and to send the information towards the translated destination address in the second data network" (emphasis added).

In respect of claim 21, Forslow does not teach the need for network address translation at any of the virtual home agents 1a, 1b and one skilled in the art would not be motivated to apply network address translation at the virtual home agents 1a, 1b for the reasons already stated.

In respect of claim 22 which defines the second data network is a carrier data network having a private IP network addressing scheme, it can be clearly seen in Forslow that the second data network is the Internet having, of course, a public IP network addressing scheme.

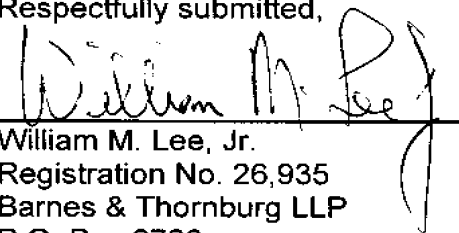
In respect of claim 24, there is no teaching or suggestion in any of Forslow, Donovan or Daude of providing a carrier data network interfacing the public data network to a switched telephone network 'STN' via a trunk gateway whose carrier data network IP address is the destination address for information being transmitted from a source address in any of the VPNs to a destination address in the carrier data network.

Consequently, the amended claims submitted herewith are believed to define an invention which is not rendered obvious by the combination of Forslow, Donovan and Daude.

Favorable reconsideration is solicited.

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Respectfully submitted,


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